ELSEVIER

ANIMAL BEHAVIOUR, 2005, **69**, x–xxxi

# CONTENTS OF VOLUME 69

Acadian flycatchers: extrapair fertilizations .. .. .. .. .. .. .. .. 921
*Acanthochromis polyacanthus* .. .. .. .. .. .. .. .. .. .. 51
*Acrocephalus arundinaceus* .. .. .. .. .. .. .. .. .. .. 307
*Acrocephalus melanopogon* .. .. .. .. .. .. .. .. .. .. 307
*Acrocephalus scirpaceus* .. .. .. .. .. .. .. .. .. .. 307
action thresholds on exogenous cue recognition in Argentine ants .. .. .. .. .. .. 741
activity budget hypothesis and sexual segregation in ungulates .. .. .. .. .. .. 257
ADAMS, E.S. Bayesian analysis of linear dominance hierarchies .. .. .. .. .. .. 1191
African buffalo: association patterns in .. .. .. .. .. .. .. .. .. 499
aggression
and blood glucose and lactate levels of male fiddler crabs .. .. .. .. .. .. 569
and 'false feeding' in meerkats .. .. .. .. .. .. .. .. .. 1273
and mate choice in meadow voles .. .. .. .. .. .. .. .. .. 1121
in pigs .. .. .. .. .. .. .. .. .. .. .. .. 1085
and size variation in convict cichlids .. .. .. .. .. .. .. .. 1157
agonistic behaviour and odour preferences of female house mice .. .. .. .. .. .. 1147
ALAKS, G. *see* MARGULIS, S.W.
alarm signals
in coral reef fish .. .. .. .. .. .. .. .. .. .. .. 51
information in yellow-bellied marmot .. .. .. .. .. .. .. .. 353
alliances
patterns of formation among spotted hyaenas .. .. .. .. .. .. .. 209
in resource utilization .. .. .. .. .. .. .. .. .. .. 127
size of .. .. .. .. .. .. .. .. .. .. .. .. 117
ALMADA, V.C. *see* AMORIM, M.C.P.
American goldfinch: caretenoid utilization in .. .. .. .. .. .. .. .. 653
American redstarts: predation risk .. .. .. .. .. .. .. .. .. 1173
AMO, L. *see* LÓPEZ, P.
AMORIM, M.C.P., ALMADA, V.C. The outcome of male-male encounters affects subsequent sound production during courtship in the cichlid fish, *Oreochromis massambicus* ... .. .. 595
*Amphiprion ocellaris* .. .. .. .. .. .. .. .. .. .. .. 643
*Anabrus simplex* .. .. .. .. .. .. .. .. .. .. .. .. 437
ANDERSON, R.C., SEARCY, W.A., NOWICKI, S. Partial song matching in an eastern population of song sparrows, *Melospiza melodia* .. .. .. .. .. .. .. .. 189
anemonefish: false clown, queue selection and switching by .. .. .. .. .. .. 643
animal behaviour research: trends in .. .. .. .. .. .. .. .. .. 1399
animal pigments, antioxidant function of .. .. .. .. .. .. .. .. 757
*Anolis carolinensis*
assessment in contests and size .. .. .. .. .. .. .. .. .. 1325
opponent recognition in .. .. .. .. .. .. .. .. .. .. 733
antioxidant function of animal pigments .. .. .. .. .. .. .. .. 757
antiphonal calling in tamarins, recognition during .. .. .. .. .. .. .. 1387
antipredator behaviour
and food choices of solitarious and gregarious locusts .. .. .. .. .. .. 471
in male Iberian rock lizards .. .. .. .. .. .. .. .. .. 1
by Siberian jay .. .. .. .. .. .. .. .. .. .. .. 345
ants
aggregates and interaction rate .. .. .. .. .. .. .. .. .. 535
primary sex ratio adjustment by queens .. .. .. .. .. .. .. .. 1031
role of the queen in regulating reproduction .. .. .. .. .. .. .. 777

ELSEVIER

ANIMAL BEHAVIOUR, 2005, **69**, x–xxxi

# CONTENTS OF VOLUME 69

Acadian flycatchers: extrapair fertilizations .. .. .. .. .. .. .. .. 921
*Acanthochromis polyacanthus* .. .. .. .. .. .. .. .. .. .. 51
*Acrocephalus arundinaceus* .. .. .. .. .. .. .. .. .. .. 307
*Acrocephalus melanopogon* .. .. .. .. .. .. .. .. .. .. 307
*Acrocephalus scirpaceus* .. .. .. .. .. .. .. .. .. .. 307
action thresholds on exogenous cue recognition in Argentine ants .. .. .. .. .. .. 741
activity budget hypothesis and sexual segregation in ungulates .. .. .. .. .. .. 257
ADAMS, E.S. Bayesian analysis of linear dominance hierarchies .. .. .. .. .. .. 1191
African buffalo: association patterns in .. .. .. .. .. .. .. .. .. 499
aggression
and blood glucose and lactate levels of male fiddler crabs .. .. .. .. .. .. 569
and 'false feeding' in meerkats .. .. .. .. .. .. .. .. .. 1273
and mate choice in meadow voles .. .. .. .. .. .. .. .. .. 1121
in pigs .. .. .. .. .. .. .. .. .. .. .. .. 1085
and size variation in convict cichlids .. .. .. .. .. .. .. .. 1157
agonistic behaviour and odour preferences of female house mice .. .. .. .. .. .. 1147
ALAKS, G. *see* MARGULIS, S.W.
alarm signals
in coral reef fish .. .. .. .. .. .. .. .. .. .. .. 51
information in yellow-bellied marmot .. .. .. .. .. .. .. .. 353
alliances
patterns of formation among spotted hyaenas .. .. .. .. .. .. .. 209
in resource utilization .. .. .. .. .. .. .. .. .. .. 127
size of .. .. .. .. .. .. .. .. .. .. .. .. 117
ALMADA, V.C. *see* AMORIM, M.C.P.
American goldfinch: caretenoid utilization in .. .. .. .. .. .. .. .. 653
American redstarts: predation risk .. .. .. .. .. .. .. .. .. 1173
AMO, L. *see* LÓPEZ, P.
AMORIM, M.C.P., ALMADA, V.C. The outcome of male-male encounters affects subsequent sound production during courtship in the cichlid fish, *Oreochromis massambicus* ... .. .. 595
*Amphiprion ocellaris* .. .. .. .. .. .. .. .. .. .. .. 643
*Anabrus simplex* .. .. .. .. .. .. .. .. .. .. .. .. 437
ANDERSON, R.C., SEARCY, W.A., NOWICKI, S. Partial song matching in an eastern population of song sparrows, *Melospiza melodia* .. .. .. .. .. .. .. .. 189
anemonefish: false clown, queue selection and switching by .. .. .. .. .. .. 643
animal behaviour research: trends in .. .. .. .. .. .. .. .. .. 1399
animal pigments, antioxidant function of .. .. .. .. .. .. .. .. 757
*Anolis carolinensis*
assessment in contests and size .. .. .. .. .. .. .. .. .. 1325
opponent recognition in .. .. .. .. .. .. .. .. .. .. 733
antioxidant function of animal pigments .. .. .. .. .. .. .. .. 757
antiphonal calling in tamarins, recognition during .. .. .. .. .. .. .. 1387
antipredator behaviour
and food choices of solitarious and gregarious locusts .. .. .. .. .. .. 471
in male Iberian rock lizards .. .. .. .. .. .. .. .. .. 1
by Siberian jay .. .. .. .. .. .. .. .. .. .. .. 345
ants
aggregates and interaction rate .. .. .. .. .. .. .. .. .. 535
primary sex ratio adjustment by queens .. .. .. .. .. .. .. .. 1031
role of the queen in regulating reproduction .. .. .. .. .. .. .. 777

*Apis mellifera*
risk sensitivity in .. .. .. .. .. .. .. .. .. .. .. 859
worker nutrition and division of labour .. .. .. .. .. .. .. .. 427
appetitive olfactory learning in fruit flies .. .. .. .. .. .. .. .. 891
Araneae: Salticidae .. .. .. .. .. .. .. .. .. .. .. 931
*Archocentrus nigrofasciatus*
competitor-to-resource ratio on aggression and size variation .. .. .. .. .. 1157
courtship in .. .. .. .. .. .. .. .. .. .. .. 143
sex-typical parental roles in .. .. .. .. .. .. .. .. .. 95
Argentine ant: aggression in .. .. .. .. .. .. .. .. .. .. 741
ARMSTRONG, J.D. *see* HÖJESJÖ, J.
ARMSWORTH, C.G., BOHAN, D.A., POWERS, S.J., GLEN, D..M., SYMONDSON, W.O.C. Behavioural responses by slugs to chemicals from a generalist predator .. .. .. .. .. 805
ARON, S. *see* DE MENTEN, L.
assassin bugs: intrasexual competition and mate choice in .. .. .. .. .. .. 275
*Asterropteryx semipunctatus* .. .. .. .. .. .. .. .. .. .. 51
AUBRET, F., BONNET, X., SHINES, R., MAUMELAT, S. Energy expenditure for parental care may be trivial for brooding pythons, *Python regius* .. .. .. .. .. .. .. .. 1043
audience effects in tufted capuchin monkeys .. .. .. .. .. .. .. .. 911

baboons
new alpha males on female stress .. .. .. .. .. .. .. .. .. 1211
quadratic postconflict affiliation among bystanders .. .. .. .. .. .. 1345
BAKER, M.B. Experience influences settling behaviour in desert isopods, *Hemilepistus reaumuri* .. .. 1131
*Balaenoptera musculus* .. .. .. .. .. .. .. .. .. .. .. 951
BALSBY, T.J.S., DABELSTEEN, T. Simulated courtship interactions elicit neighbour intrusions in the whitethroat, *Sylvia communis* .. .. .. .. .. .. .. .. 161
BARROS, N.B. *see* GANNON, D.P.
BATEMAN, P.W., FLEMING, P.A. Direct and indirect costs of limb autonomy in field crickets, *Gryllus bimaculatus* .. .. .. .. .. .. .. .. .. .. 151
bats: spatial memory *versus* cue-directed search .. .. .. .. .. .. .. .. 315
Bayesian analysis of linear dominance hierarchies .. .. .. .. .. .. .. 1191
BECK, B.B. *see* SHILLITO, D.J.
BEDNEKOFF, P.A., LIMA, S.L. Testing for peripheral vigilance: do birds value what they *see* when not overtly vigilant? .. .. .. .. .. .. .. .. .. .. 1165
BEEHNER, J.C., BERGMAN, T.J., CHENEY, D.L., SEYFARTH, R.M., WHITTENS, P.L. The effect of new alpha males on female stress in free-ranging baboons .. .. .. .. .. .. 1211
beetles: mate loss, response to .. .. .. .. .. .. .. .. .. .. 551
begging
and false alarms in nestling birds .. .. .. .. .. .. .. .. .. 701
for food and reproductive options in ponerine ant .. .. .. .. .. .. .. 293
BERGMAN, T.J. *see* BEEHNER, J.C.
BERGMÜLLER, R., TABORSKY, M. Experimental manipulation of helping in a cooperative breeder: helpers 'pay to stay' by pre-emptive appeasement .. .. .. .. .. .. 19
BERNAYS, E.A., BRIGHT, K.L. Distinctive flavours improve foraging efficiency in the polyphagous grasshopper, *Taeniopoda eques* .. .. .. .. .. .. .. .. .. 463
BIESINGER, Z., HAEFNER, J.W. Proximate cues for predator searching: a quantitative analysis of hunger and encounter rate in the ladybird beetle, *Coccinella septempunctata* .. .. .. .. 235
BILLEN, J. *see* KAPTEIN, N.
BINET, F. *see* DURIEZ, O.
biological clock and sun compass orientation sandhoppers .. .. .. .. .. .. 835
biparental care in house sparrows .. .. .. .. .. .. .. .. .. 481
birds: nestmates learning the same song .. .. .. .. .. .. .. .. .. 1007
black ratsnakes, sexual selection in .. .. .. .. .. .. .. .. .. 225
black-winged stilt: preferential hemifield use .. .. .. .. .. .. .. .. 1077
BLANCO, S. *see* JEANSON, R.
*Blattella germanica* .. .. .. .. .. .. .. .. .. .. .. 169
blood glucose and lactate levels of male fiddler crabs .. .. .. .. .. .. .. 569
BLOUIN-DEMERS, G., GIBBS, H.L., WEATHERHEAD, P.J. Genetic evidence for sexual selection in black ratsnakes, *Elaphe obsoleta* .. .. .. .. .. .. .. .. .. 225

blue-footed booby: male preference for female foot colour .. .. .. .. .. .. 59
blue-grey gnatcatchers: predation risk .. .. .. .. .. .. .. .. .. .. 1173
blue whale: diel variation in calls .. .. .. .. .. .. .. .. .. .. 951
bluebirds: coloration and competition for nestboxes in .. .. .. .. .. .. .. 67
BLUMSTEIN, D.T., MUNOS, O. Individual, age and sex-specific information is contained in yellow-bellied marmot alarm calls .. .. .. .. .. .. .. .. 353
BOCKELMAN, A. *see* ITZKOWITZ, M.
BOHAN, D.A. *see* ARMSWORTH, C.G.
BOLHUIS, J.E., SCHOUTEN, W.G.P., SCHRAMA, J.W., WIEGANT, V.M. Individual coping characteristics, aggressiveness and fighting strategies in pigs .. .. .. .. .. .. .. 1085
*Bombus impatiens:* flower constancy in .. .. .. .. .. .. .. .. .. 939
BONDURIANSKY, R., WHEELER, J., ROWE, L. Ejaculate feeding and female fitness in the sexually dimorphic fly *Prochyliza xanthostoma* (Diptera: Piophilidae) .. .. .. .. .. 489
BONESS, D.J. *see* PAREDES, R.
BONNET, X. *see* AUBRET, F.
bottlenose dolphins
  calf mortality in .. .. .. .. .. .. .. .. .. .. .. .. 899
  prey detection by .. .. .. .. .. .. .. .. .. .. .. .. 709
  signature whistle use by .. .. .. .. .. .. .. .. .. .. 1373
*Branta canadensis minima* .. .. .. .. .. .. .. .. .. .. 973
breeder quality in herring gulls .. .. .. .. .. .. .. .. .. .. 301
breeding
  performance of herring gulls .. .. .. .. .. .. .. .. .. 301
  and spatial structuring in Canada geese .. .. .. .. .. .. .. .. 973
BRIGHT, K.L. *see* BERNAYS, E.A.
BRODIE, E.D.III *see* KÖLLIKER, M.
brown trout: sneaky feeding by salmon .. .. .. .. .. .. .. .. .. 1037
BUCHHOLZ, R. *see* HILL, G.E.
BUCZKOWSKI, G., SILVERMAN, J. Context-dependent nestmate discrimination and the effect of action thresholds on exogenous cue recognition in the Argentine ant .. .. .. .. .. 741
bulb mites: age dependence of mating ability .. .. .. .. .. .. .. .. 1101
bulldog ant: role of the queen in regulating reproduction .. .. .. .. .. .. 777
bumblebees: flower constancy in .. .. .. .. .. .. .. .. .. 939
BURGHARDT, G.M. *see* WATERS, R.M.
burrower bugs: maternal food provisioning in .. .. .. .. .. .. .. .. 959
BURT, D.M. *see* FEINBERG, D.R.
BUTLER, S.J., WHITTINGHAM, M.J., QUINN, J.L., CRESSWELL, W. Quantifying ihe interaction between food density and habitat structure in determining patch selection .. .. .. .. 337
bystanders
  baboons, quadratic postconflict affiliation among .. .. .. .. .. .. .. 1345
  response towards naïve conspecifics in green swordtail fish .. .. .. .. .. .. 1139

calf mortality in bottlenose dolphins .. .. .. .. .. .. .. .. .. 899
CALL, J. *see* KAMINSKI, J.
calling
  *see also* song
  alarm calls by marmot .. .. .. .. .. .. .. .. .. .. 353
  amplitude and male spacing in barking treefrogs .. .. .. .. .. .. .. .. 419
  antiphonal, in tamarins, recognition during .. .. .. .. .. .. .. .. 1387
  in blue whales, diel variation .. .. .. .. .. .. .. .. .. 951
  characteristics in crickets .. .. .. .. .. .. .. .. .. .. 1235
  in crickets .. .. .. .. .. .. .. .. .. .. .. 881
  food-associated, in tufted capuchin monkeys .. .. .. .. .. .. .. .. 911
*Calopteryx haemorrhoidalis:* and female mating status .. .. .. .. .. .. .. 797
CAMERON, E.Z., DU TOIT, J.T. Social influences on vigilance behaviour in giraffes, *Giraffa camelopardalis* .. .. .. .. .. .. .. .. .. .. 1337
Canada geese: spatial structuring in .. .. .. .. .. .. .. .. .. 973
*Canis familiaris:* personality traits in .. .. .. .. .. .. .. .. .. 283
*Canis lupus* .. .. .. .. .. .. .. .. .. .. .. .. 1181
*Capra bircus* .. .. .. .. .. .. .. .. .. .. .. .. 11

*Capra hircus:* diet selection of .. .. .. .. .. .. .. .. .. .. 541
capuchin monkeys: food-associated calls and audience effects .. .. .. .. .. .. 911
*Cardiocondyla obscuruior* .. .. .. .. .. .. .. .. .. .. .. 1031
*Carduelis tristis* .. .. .. .. .. .. .. .. .. .. .. 653
caretenoid utilization in the American goldfinch .. .. .. .. .. .. .. 653
Carib grackles: social learning about predators .. .. .. .. .. .. .. .. 669
CARRERA, P. *see* PERATTI, A.V.
CARRIGAN, J.G. *SEE* NOËL, M.V.
*Cebus apella nigritus* .. .. .. .. .. .. .. .. .. .. .. 911
*Ceratitis capitata* .. .. .. .. .. .. .. .. .. .. .. 771
*Cercocebus torquatus:* triadic interactions in .. .. .. .. .. .. .. .. 445
*Cervus elaphus:* predation risk by wolves .. .. .. .. .. .. .. .. .. 1181
chaffinches: interactions between food density and habitat structure .. .. .. .. .. 337
CHAPMAN, T. *see* KRAAIJEVELD, K.
chemical cues
  in coral reef âsh .. .. .. .. .. .. .. .. .. .. .. 51
  responses by slugs to .. .. .. .. .. .. .. .. .. .. 805
chemoreception in crayfish snakes .. .. .. .. .. .. .. .. .. 363
CHENEY, D.L. *see* BEEHNER, J.C.
chicks
  colour biases as question of taste .. .. .. .. .. .. .. .. .. 587
  use of spatial information in .. .. .. .. .. .. .. .. .. 1093
CHIN, A. *see* KLUG, H.
CHOU, I.-C., WANG, P.-H., SHEN, P.-S., TSO, I.-M. A test of prey-attracting and predator defence functions
  of prey carcass decorations built by *Cyclosa* spiders .. .. .. .. .. .. 1055
CHUCKALOVCAK, J.P. *see* KÖLLIKER, M.
CHURCH, S.C. *see* WHITE, E.M.
cichlid fish
  competitor-to-resource ratio on aggression and size variation .. .. .. .. .. 1157
  courtship in .. .. .. .. .. .. .. .. .. .. .. 143
  male-male encounters and sound production during courtship .. .. .. .. .. 595
  'pay to stay' hypothesis .. .. .. .. .. .. .. .. .. .. 19
  sex-typical parental roles in .. .. .. .. .. .. .. .. .. 95
CIMPRICH, D.A., WOODREY, M.S., MOORE, F.R. Passerine migrants respond to variation in predation
  risk during stopover .. .. .. .. .. .. .. .. .. .. 1173
classical conditioning and reproduction in Japanese quail .. .. .. .. .. .. .. 983
claw waving of male fiddler crabs .. .. .. .. .. .. .. .. .. 569
CLEVELAND, A. *see* ITZKOWITZ, M.
CLUTTON-BROCK, T.H., RUSSELL, A.F., SHARPES, L.L., JORDAN, N.R. 'False feeding' and aggression in
  meerkat societies .. .. .. .. .. .. .. .. .. .. 1273
coal tit: extrapair paternity in .. .. .. .. .. .. .. .. .. .. 1013
coccidial infection and plumage coloration in wild turkeys .. .. .. .. .. .. 387
*Coccinella septempunctata* .. .. .. .. .. .. .. .. .. .. 235
cockroaches: self-organized aggregation in .. .. .. .. .. .. .. .. 169
*Coenagrion mercuriale:* lifetime mating success in .. .. .. .. .. .. .. .. 1303
colour/coloration
  biases as question of taste .. .. .. .. .. .. .. .. .. .. 587
  and competition for nestboxes in bluebirds .. .. .. .. .. .. .. 67
  costs of in the American goldfinch .. .. .. .. .. .. .. .. 653
  female foot, male preference for in blue-footed booby .. .. .. .. .. .. 59
  of plumage in wild turkeys .. .. .. .. .. .. .. .. .. 387
*Columbia livia* f. *domestica* .. .. .. .. .. .. .. .. .. .. 813
communication: costs of in killer whales .. .. .. .. .. .. .. .. 395
compensatory behaviour of thick-billed murres .. .. .. .. .. .. .. .. 197
competitor-to-resource ratio on aggression and size variation in convict cichlids .. .. .. .. 1157
CONNOR, R. *see* WHITEHEAD, H.
conspecific density and female reproduction in an egg-carrying bug .. .. .. .. .. 269
conspecific scanning in starlings .. .. .. .. .. .. .. .. .. 73
contact chemistry and oviposition behaviour of swallowtail butterfly .. .. .. .. .. 107

convict cichlid fish
competitor-to-resource ratio on aggression and size variation .. .. .. .. .. 1157
courtship in .. .. .. .. .. .. .. .. .. .. .. 143
sex-typical parental roles in .. .. .. .. .. .. .. .. .. 95
cooperative problem solving in primates .. .. .. .. .. .. .. .. 133
copulation: great grey shrike trades food for .. .. .. .. .. .. .. .. 529
coral reef fish: chemical alarm signals in.. .. .. .. .. .. .. .. .. 51
CORDERO RIVERA, A. *see* UHFA, E.
corticosterone in ring-necked pheasants.. .. .. .. .. .. .. .. .. 249
cottontop tamarin
cooperative problem solving in .. .. .. .. .. .. .. .. .. 133
processing vocal signals for recognition .. .. .. .. .. .. .. .. 1387
*Coturnix japonica:* reproductive success in .. .. .. .. .. .. .. .. 983
COUREAUD, G. *see* MONCOMBE, A.-S.
courtship
in male fruit flies .. .. .. .. .. .. .. .. .. .. 1203
and male-male encounters in the cichlid fish .. .. .. .. .. .. .. .. 595
preferential hemifield use in black-winged stilt .. .. .. .. .. .. .. .. 1077
simulated interactions in whitethroat .. .. .. .. .. .. .. .. 161
crabs: predation risk .. .. .. .. .. .. .. .. .. .. 967
crayfish snakes: chemoreception in .. .. .. .. .. .. .. .. .. 363
CREEL, S., WINNIE, J.A.Jr Responses of elk herd size in fine-scale spatial and temporal variation in the risk of predation by wolves .. .. .. .. .. .. .. .. 1181
CREMER, S. *see* DE MENTEN, L.
CRESSWELL, W. *see* BUTLER, S.J.
crickets
calling song characteristics in .. .. .. .. .. .. .. .. .. 1235
calling songs, differences in .. .. .. .. .. .. .. .. .. 881
*Crocuta crocuta:* patterns of formation among .. .. .. .. .. .. .. .. 209
CRONIN, K.A., KURIAN, K.V., SNOWDON, C.T. Cooperative problem solving in a cooperatively breeding primate *(Saguinus oedipus)* .. .. .. .. .. .. .. .. 133
cue-directed search for relocating food targets in flower bats: .. .. .. .. .. .. 315
*Culaea inconstans:* changes in ovulatory cycle in .. .. .. .. .. .. .. .. 181
*Cyclosa confusa* .. .. .. .. .. .. .. .. .. .. .. .. 1055

DABELSTEEN, T.
*see* BALSBY, T.J.S.
*see* PEAKE, T.M.
damselfish: chemical alarm signals in .. .. .. .. .. .. .. .. .. 51
damselflies
and female mating status .. .. .. .. .. .. .. .. .. .. 797
lifetime mating success in .. .. .. .. .. .. .. .. .. .. 1303
*Danio rerio:* male territoriality and oviposition in .. .. .. .. .. .. .. 1317
dark-eyed juncos: peripheral vigilance of .. .. .. .. .. .. .. .. 1165
DAWSON, C. *see* SMISETH, P.T.
DE BOER, J.G., SNOEREN, T.A.L., DICKE, M. Predatory mites learn to discriminate between plant volatiles induced by prey and nonprey herbivores .. .. .. .. .. .. 869
DE MENTEN, L., CREMER, S., HEINZE, J., ARON, S. Primary sex ratio adjustment by ant queens in response to local mate competition .. .. .. .. .. .. .. .. 1031
DEECKE, V.B., FORD, J.K.B., SLATER, P.J.B. The vocal behaviour of mammal-eating killer whales: communicating with costly calls .. .. .. .. .. .. .. .. 395
DELLA CHIESA, A. *see* VENTOLINI, N.
DENEUBOURG, J.-L.
*see* JEANSON, R.
*see* NICOLIS, S.C.
*Deroceras reticulatum* .. .. .. .. .. .. .. .. .. .. .. 805
desert isopods: settling behaviour in .. .. .. .. .. .. .. .. .. 1131
DESPLAND, E., SIMPSON, S.J. Food choices of solitarious and gregarious locusts reflect cryptic and aposematic antipredator strategies .. .. .. .. .. .. .. .. 471

DI BITETTI, M.S. Food-associated calls and audience effects in tufted capuchin monkeys, *Cebus apella nigritus* .. .. .. .. .. .. .. .. .. .. 911
DICKE, M. *see* DE BOER, J.G.
diel variation in blue whale calls .. .. .. .. .. .. .. .. .. 951
DIETEMANN, V., PEETERS, C., HÖLLDOBLER, B. Role of the queen in regulating reproduction in the bulldog ant *Myrmecia gulosa:* control or signalling? .. .. .. .. .. .. 777
DIETRICH, V. *see* SCHMOLL, T.
Diptera: Piophilidae .. .. .. .. .. .. .. .. .. .. .. 489
division of labour in honeybees .. .. .. .. .. .. .. .. .. .. 427
dogs: personality traits in .. .. .. .. .. .. .. .. .. .. 283
DOMBROWSKI, K. *see* ZURI, I.
DOMJAN, M. *see* MAHOMETA, M.J.
DOUCET, S.M. *see* HILL, G.E.
*Drosophila grimshawi* .. .. .. .. .. .. .. .. .. .. .. 851
*Drosophila* larvae: appetitive olfactory learning in .. .. .. .. .. .. .. 891
*Drosophila melanogaster:* courtship in .. .. .. .. .. .. .. .. .. 1203
DRUEN, M. *see* EARLEY, R.L.
DUGATKIN, L.A.
*see* EARLEY, R.L.
*see* GODIN, J.-G.J.
DUKAS, R. Experience improves courtship in male fruit flies .. .. .. .. .. .. 1203
DUMONT, B. *see* HEWITSON, L.
DUNCAN, A.J. *see* GINANE, C.
DURIEZ, O., FRITZ, H., BINET, F., TREMBLAY, Y., FERRAND, Y. Individual activity rates in wintering Eurasian woodcocks: starvation *versus* predation risk trade-off? .. .. .. .. .. 39

EARLEY, R.L., DRUEN, M., DUGATKIN, L.A. Watching fights does not alter a bystander's response towards naïve conspecifics in male green swordtail fish, *Xiphophorus helleri* .. .. .. .. 1139
eavesdropping in male great tits .. .. .. .. .. .. .. .. .. .. 1063
egg survivorship in flagfish .. .. .. .. .. .. .. .. .. .. 661
ejaculate feeding and female fitness in piophillid flies .. .. .. .. .. .. .. 489
EKMAN, J. *see* GRIESSER, M.
*Elaphe obsoleta* .. .. .. .. .. .. .. .. .. .. .. .. 225
elephants: socioecology of .. .. .. .. .. .. .. .. .. .. 1357
ELIAS, D.O., HEBETS, E.A., HOY, R.R., MASON, A.C. Seismic signals are crucial for male mating success in a visual specialist jumping spider (Araneae: Salticidae) .. .. .. .. .. 931
elk: predation risk by wolves .. .. .. .. .. .. .. .. .. .. 1181
ELSTON, D.A. *see* GINANE, C.
*Empidonax virescens* .. .. .. .. .. .. .. .. .. .. .. 921
energy expenditure for parental care in brooding pythons .. .. .. .. .. .. 1043
ENGH, A.L., SIEBERT, E.R., GREENBERG, D.A., HOLEKAMP, K.E. Patterns of alliance formation and postconflict aggression indicate spotted hyaenas recognize third-party relationships .. .. 209
ENSMINGER, A.L., MEIKLE, D.B. Effects of male kinship and agonistic behaviour on reproduction and odour preferences of female house mice, *Mus domesticus* .. .. .. .. .. 1147
EPPLEN, J.T. *see* SCHMOLL, T.
escape decions in fiddler crabs .. .. .. .. .. .. .. .. .. .. 603
escape response delays in wintering redshank .. .. .. .. .. .. .. .. .. 1285
ethoinformatics in animal behaviour research .. .. .. .. .. .. .. .. .. 1399
Eurasian woodcocks: wintering, individual activity rates in .. .. .. .. .. .. 39
exogenous cue recognition in the Argentine ant .. .. .. .. .. .. .. .. .. 741
extrapair fertilizations by male Acadian flycatchers .. .. .. .. .. .. .. .. 921
extrapair paternity in coal tits .. .. .. .. .. .. .. .. .. .. 1013

false alarms and begging in nestling birds .. .. .. .. .. .. .. .. 701
false clown anemonefish: queue selection and switching by .. .. .. .. .. .. 643
'false feeding' and aggression in meerkats .. .. .. .. .. .. .. .. 1273
FEENY, P. *see* HEINZ, C.A.
FEINBERG, D.R., JONES, B.C., LITTLE, A.C., BURT, D.M., PERRETT, D.I. Manipulation of fundamental and formant frequencies influence the attractiveness of human male voices .. .. .. 561
female competition in wild house mice .. .. .. .. .. .. .. .. .. .. 1259

female control of mating sequences in mountain scorpion .. .. .. .. .. .. 453
female fitness and ejaculate feeding in piophillid flies .. .. .. .. .. .. .. 489
female mate choice
discrimination in wasps .. .. .. .. .. .. .. .. .. .. 1107
in the guppy .. .. .. .. .. .. .. .. .. .. .. 999
in meadow voles .. .. .. .. .. .. .. .. .. .. 1121
plasticity in .. .. .. .. .. .. .. .. .. .. 689
female reproduction in an egg-carrying bug .. .. .. .. .. .. .. .. 269
female stress in baboons, new alpha males on .. .. .. .. .. .. .. .. 1211
females
male Acadian flycatchers obtain extrapair fertilizations with .. .. .. .. .. 921
mate loss, response to .. .. .. .. .. .. .. .. .. .. 551
rock sparrows, male preference .. .. .. .. .. .. .. .. .. 1243
FERGUSON, A.M. *see* GIBBONS, M.E.
FERNÁNDEZ-JURICIC, E., SMITH, R., KACELNIK, A. Increasing the costs of conspecific scanning in socially foraging starlings affects vigilance and foraging behaviour .. .. .. .. 73
FERRAND, Y. *see* DURIEZ, O.
FERRERO, E.A. *see* VENTOLINI, N.
FESSL, B. *see* KLEINDORFER, S.
fiddler crabs
blood glucose and lactate levels in .. .. .. .. .. .. .. .. .. 569
predator avoidance in
escape decions .. .. .. .. .. .. .. .. .. .. .. 603
visual cues .. .. .. .. .. .. .. .. .. .. .. 615
field crickets
calling songss, differences in .. .. .. .. .. .. .. .. .. 881
limb autonomy in .. .. .. .. .. .. .. .. .. .. 151
fighting
strategies in pigs .. .. .. .. .. .. .. .. .. .. .. 1085
success in wild meerkats .. .. .. .. .. .. .. .. .. .. 1023
fission-fusion societies
alliances in .. .. .. .. .. .. .. .. .. .. .. 127
association patterns in African buffalo .. .. .. .. .. .. .. .. 499
flagfish: egg survivorship in .. .. .. .. .. .. .. .. .. .. 661
FLEMING, P.A. *see* BATEMAN, P.W.
flower bats: spatial memory *versus* cue-directed search .. .. .. .. .. .. .. 315
flower constancy in bumblebees .. .. .. .. .. .. .. .. .. 939
FLOYD, S.B. *see* MURPHY, C.G.
food/feeding
calls in tufted capuchin monkeys .. .. .. .. .. .. .. .. .. 911
choices: antipredator strategies of locusts .. .. .. .. .. .. .. .. 471
density and patch selection by chaffinches .. .. .. .. .. .. .. 337
great grey shrike trading for extrapair copulations .. .. .. .. .. .. .. 529
motivation and experience on chemoreception in crayfish snakes .. .. .. .. .. 363
provisioning in burrower bugs .. .. .. .. .. .. .. .. .. 959
targets of flower bats, relocating .. .. .. .. .. .. .. .. .. 315
foraging
conspecific scanning and vigilance in starlings .. .. .. .. .. .. .. 73
distinctive flavours and efficiency in grasshoppers .. .. .. .. .. .. .. 463
of red-backed salamanders .. .. .. .. .. .. .. .. .. 721
response of sheep to variability in resource distribution .. .. .. .. .. .. 1069
and spectral irradiance in the guppy .. .. .. .. .. .. .. .. 519
by three-spined sticklebacks .. .. .. .. .. .. .. .. .. 329
FORD, J.K.B. *see* DEECKE, V.B.
FORSTER, G.L., WATT, M.J., KORZAN, W.J., RENNER, K.J., SUMMERS, C.H. Opponent recognition in male green anoles, *Anolis carolinensis* .. .. .. .. .. .. .. 733
FOURNIER, R. *see* JEANSON, R.
FOWLER, A.C. Fine-scale spatial structuring in cackling Canada geese related to reproductive performance and breeding philopatry .. .. .. .. .. .. .. .. 973

FOX, C.G. *see* STAFFORD, K.M.
FREIRE, R., ROGERS, L.J. Experience-induced modulation of the use of spatial information in the domestic chick .. .. .. .. .. .. .. .. .. .. 1093
*Fringilla coelebs:* interactions between food density and habitat structure .. .. .. .. .. 337
FRITZ, H. *see* DURIEZ, O.
fruit flies
appetitive olfactory learning in .. .. .. .. .. .. .. .. .. 891
cost of pheromone producton in .. .. .. .. .. .. .. .. .. 851
courtship in .. .. .. .. .. .. .. .. .. .. .. 1203

GALEF, B.G.Jr *see* GRIFFIN, A.S.
GALLUP, G.G.Jr *see* SHILLITO, D.J.
*Gallus gallus domesticus*
biases as question of taste .. .. .. .. .. .. .. .. .. .. 587
use of spatial information in .. .. .. .. .. .. .. .. .. .. 1093
GANNON, D.P., BARROS, N.B., NOWACEK, D.P., READ, A.J., WAPLES, D.M., WELLS, R.S. Prey detection by bottlenose dolphins, *Tursiops truncatus:* an experimental test of the passive listening hypothesis 709
garter snakes: mate-locating ability and mating success .. .. .. .. .. .. .. 1251
*Gasterosteus aculeatus:* foraging with familiars, exploited by outsiders .. .. .. .. .. 329
gaze direction in object choice task of domestic goats .. .. .. .. .. .. .. 11
GEGEAR, R.J., LAVERTY, T.M. Flower constancy in bumblebees: a test of the trait variability hypothesis .. 939
genetic similarity
and extrapair paternity in coal tits.. .. .. .. .. .. .. .. .. 1013
of paternity in shorebirds .. .. .. .. .. .. .. .. .. .. 765
genetics of female mate discrimination in wasps.. .. .. .. .. .. .. .. 1107
GERBER, B. *see* NEUSER, K.
GETZ, W.M. *see* CROSS, P.C.
GIBBONS, M.E., FERGUSON, A.M., LEE, D.R. Both learning and heritability affect foraging behaviour of red-backed salamanders, *Plethodon cinereus* .. .. .. .. .. .. .. 721
GIBBS, H.L. *see* BLOUIN-DEMERS, G.
GINANE, C., DUNCAN, A.J., YOUNG, S.A., ELSTON, D.A., GORDON I.J. Herbivore diet selection in response to simulated variation in nutrient rewards and plant secondary compounds .. .. 541
*Giraffa camelopardalis* .. .. .. .. .. .. .. .. .. .. .. 1337
giraffes: vigilance behaviour in .. .. .. .. .. .. .. .. .. .. 1337
GLEN, D..M. *see* ARMSWORTH, C.G.
*Glossophaga commissarisi* .. .. .. .. .. .. .. .. .. .. 315
*Gnamptogenys striatula* .. .. .. .. .. .. .. .. .. .. 293
goats
diet selection of .. .. .. .. .. .. .. .. .. .. .. 541
gaze direction and use of social cues .. .. .. .. .. .. .. .. 11
GOBIN, B. *see* KAPTEIN, N.
goby: chemical alarm signals in .. .. .. .. .. .. .. .. .. .. 51
GODIN, J.-G.J., HERDMAN, E.J.E., DUGATKIN, L.A. Social influences on female mate choice in the guppy, *Poecilia reticulata:* generalized and repeatable trait-copying behaviour .. .. .. 999
golden egg bug: female reproduction in .. .. .. .. .. .. .. .. .. 269
goldfinch: nutrional control of caretenoid utilization in .. .. .. .. .. .. .. 653
GORDON, I.J.
*see* GINANE, C.
*see* HEWITSON, L.
*see* PÉREZ-BARBERíA, F.J.
grackles: false alarms and begging in .. .. .. .. .. .. .. .. .. 701
GRANT, J.W.A. *SEE* NOËL, M.V.
grasshopper: distinctive flavours and foraging efficiency .. .. .. .. .. .. .. 463
GRAY, S.J. *see* JENSEN, S.P.
great grey shrike: trading food for extrapair copulations .. .. .. .. .. .. .. 529
great reed warbler: nest defence behaviour .. .. .. .. .. .. .. .. 307
great tits: song type matching and switching in .. .. .. .. .. .. .. .. 1063
green anoles: opponent recognition in .. .. .. .. .. .. .. .. .. 733
green swordtail fish: bystander's response towards naïve conspecifics .. .. .. .. .. 1139

GREENBERG, D.A. *see* ENGH, A.L.
GRIESSER, M., EKMAN, J. Nepotistic mobbing behaviour in the Siberian jay, *Perisoreus infaustus* .. .. 345
GRIFFIN, A.S., GALEF, B.G.Jr Social learning about predators: does timing matter? .. .. .. 669
GRIFFITH, S.C. *see* THUMAN, K.A.
GRIFFITHS, S.W. *see* HÖJESJÖ, J.
GRIGGIO, M., VALERA, F., CASAS, A., PILASTRO, A. Males prefer ornamented females: a field experiment of male choice in the rock sparrow .. .. .. .. .. .. .. .. 1243
*Gryllus bimaculatus* .. .. .. .. .. .. .. .. .. .. 151
guarding and egg survivorship in flagfish .. .. .. .. .. .. .. .. 661
guppy
female mate choice in .. .. .. .. .. .. .. .. .. .. 999
spectral irradiance and foraging efficiency in .. .. .. .. .. .. .. 519
gyrinid beetles: predator defence .. .. .. .. .. .. .. .. .. 579
*Gyrinus aeratus* .. .. .. .. .. .. .. .. .. .. .. 579
*Gyrinus minutus* .. .. .. .. .. .. .. .. .. .. .. 579
*Gyrinus opacus* .. .. .. .. .. .. .. .. .. .. .. 579

habitat structure
and excluding neighbours from territories .. .. .. .. .. .. .. .. 785
and patch selection by chaffinches .. .. .. .. .. .. .. .. 337
*Habronattus dossenus* .. .. .. .. .. .. .. .. .. .. 931
HAEFNER, J.W. *see* BIESINGER, Z.
HALPERN, M. *see* ZURI, I.
HAMILTON, P.S., SULLIVAN, N.K. Female mate attraction in ornate tree lizards, *Urosaurus ornatus:* a multivariate analysis .. .. .. .. .. .. .. .. .. .. 219
HÄRLIN, C. To have and have not: volatile secretions make a difference in gyrinid beetle predator defence .. .. .. .. .. .. .. .. .. .. 579
HART, P.J.B. *see* WARD, A.J.W.
hawkmoths: nectar feeding .. .. .. .. .. .. .. .. .. .. 407
HAWLENA, D. *see* LÓPEZ, P.
HAZLETT, B.A., McLAY, C. Responses to predation risk: alternative strategies in the crab *Heterozius rotundifrons* .. .. .. .. .. .. .. .. .. .. 967
health benefits of sexually selected colour .. .. .. .. .. .. .. .. 757
HEBETS, E.A. *see* ELIAS, D.O.
HEINZ, C.A., FEENY, P. Effects of contact chemistry and host plant experience in the oviposition behaviour of the eastern black swallowtail butterfly .. .. .. .. .. .. 107
HEINZE, J. *see* DE MENTEN, L.
*Hemilepistus reaumuri* .. .. .. .. .. .. .. .. .. .. 1131
HEMMI, J.M. Predator avoidance in fiddler crabs: 1. Escape decions in relation to the risk of predation .. 603
HEMMI, J.M. Predator avoidance in fiddler crabs: 2. The visual cues .. .. .. .. .. 615
herbivores
diet selection of .. .. .. .. .. .. .. .. .. .. .. 541
predatory mites discriminate plant volatiles .. .. .. .. .. .. .. 869
HERDMAN, E.J.E. *see* GODIN, J.-G.J.
heritability and foraging behaviour of red-backed salamanders .. .. .. .. .. .. 721
herring gulls: behaviour and breeding performance of .. .. .. .. .. .. .. 301
*Heterozius rotundifrons* .. .. .. .. .. .. .. .. .. .. 967
HEWITSON, L., DUMONT, B., GORDON, I.J. Response of foraging sheep to variability in the spatial distribution of resources .. .. .. .. .. .. .. .. .. .. 1069
hierarchies, bayesian analysis of .. .. .. .. .. .. .. .. .. .. 1191
HILL, G.E.
*see* McGRAW, K.J.
*see* SIEFFERMAN, L.
HILL, G.E., DOUCET, S.M., BUCHHOLZ, R. The effect of coccidial infection on iridescent plumage coloration in wild turkeys .. .. .. .. .. .. .. .. .. .. 387
*Himantopus himantopus* .. .. .. .. .. .. .. .. .. .. 1077
HOI, H. *see* KLEINDORFER, S.
HÖJESJÖ, J., ARMSTRONG, J.D., GRIFFITHS, S.W. Sneaky feeding by salmon in sympatry with dominant brown trout .. .. .. .. .. .. .. .. .. .. 1037

HOLEKAMP, K.E. *see* ENGH, A.L.
HÖLLDOBLER, B. *see* DIETEMANN, V.
HONDA-SUMI, E. Difference in calling song of three field crickets of the genus *Teleogryllus:* the role in premating isolation .. .. .. .. .. .. .. .. .. 881
honeybees
risk sensitivity in .. .. .. .. .. .. .. .. .. .. .. 859
worker nutrition and division of labour .. .. .. .. .. .. .. .. .. 427
HORN, A.G. *see* LEONARD, M.L.
host feeding in parasitoids: costs and benefits .. .. .. .. .. .. .. .. 1293
host plant experience and oviposition behaviour of swallowtail butterfly .. .. .. .. .. 107
house mice
female, reproduction and odour preferences of .. .. .. .. .. .. .. 1147
female competition in .. .. .. .. .. .. .. .. .. .. 1259
house sparrows: biparental care in .. .. .. .. .. .. .. .. .. 481
HOY, R.R. *see* ELIAS, D.O.
HROMADA, M. *see* TRYJANOWSKI, P.
HUDSON, S.J. *see* WHITE, E.M.
human male voices, attractiveness of .. .. .. .. .. .. .. .. .. 561
HURST, J.L. *see* JENSEN, S.P.
HUSSE, J. *see* NEUSER, K.
*Hyla gratiosa* .. .. .. .. .. .. .. .. .. .. .. .. 419
Hymenoptera, Ptermalidae .. .. .. .. .. .. .. .. .. .. 1107

Iberian rock lizards: antipredator behaviour .. .. .. .. .. .. .. .. 1
immune function and calling song characteristics in crickets .. .. .. .. .. .. 1235
individual coping characteristics in pigs .. .. .. .. .. .. .. .. .. 1085
interaction rate in ant colonies .. .. .. .. .. .. .. .. .. .. 535
intrasexual competition in assassin bugs .. .. .. .. .. .. .. .. 275
iridescent plumage coloration in wild turkeys .. .. .. .. .. .. .. .. 387
isopods: settling behaviour in .. .. .. .. .. .. .. .. .. .. 1131
ITZKOWITZ, M., SANTANGELO, N., CLEVELAND, A., BOCKELMAN, A., RICHTER, M. Is the selection of sex-typical parental roles based on an assessment process? A test in the monagamous convict cichlid fish .. .. .. .. .. .. .. .. .. .. 95

Japanese quail: reproductive success in .. .. .. .. .. .. .. .. .. 983
JEANSON, R., RIVAULT, C., DENEUBOURG, J.-L., BLANCO, S., FOURNIER, R., JOST, C., THERAULAZ, G. Self-organized aggregation in cockroaches .. .. .. .. .. .. .. .. 169
JENSEN, S.P., GRAY, S.J., HURST, J.L. Excluding neighbours from territories: effects of habitat structure and resource distribution .. .. .. .. .. .. .. .. .. 785
JENSSEN, T.A., DECOURCY, K.R., CONGDON, J.D. Assessment in contests of male lizards *(Anolis carolinensis):* how should smaller males respond when size matters? .. .. .. 1325
JOHANSSON, B.G., JONES, T.M., WIDEMO, F. Cost of pheromone producton in a lekking *Drosophila* .. 851
JONES, B.C. *see* FEINBERG, D.R.
JONES, I.L. *see* PAREDES, R.
JONES, T.M. *see* JOHANSSON, B.G.
*Jordanella floridae* .. .. .. .. .. .. .. .. .. .. .. 661
JOST, C. *see* JEANSON, R.
JUDGE, P.G., MULLEN, S.H. Quadratic postconflict affiliation among bystanders in a hamadryas baboon group .. .. .. .. .. .. .. .. .. .. 1345
jumping spiders: seismic signals in male mating success .. .. .. .. .. .. .. 931
*Junco hyemalis* .. .. .. .. .. .. .. .. .. .. .. 1165
juncos: peripheral vigilance of .. .. .. .. .. .. .. .. .. .. 1165

KACELNIK, A. *see* FERNÁNDEZ-JURICIC, E.
KAITALA, A. *see* KATAVLA, M.
KAMINSKI, J., RIEDEL, J., CALL, J., TOMASELLO, M. Domestic goats, *Capra bircus* follow gaze direction and use of social cues in an object choice task .. .. .. .. .. .. .. 11
KAPTEIN, N., BILLEN, J., GOBIN, B. Larval begging for food enhances reproductive options in the ponerine ant *Gnamptogenys striatula* .. .. .. .. .. .. .. .. 293

KATAVLA, M., KAITALA, A. The effect of conspecific density on female reproduction in an egg-carrying bug .. .. .. .. .. .. .. .. .. .. 269
KATSOYANNOS, B.I. *see* KRAAIJEVELD, K.
killer whales: vocal behaviour of .. .. .. .. .. .. .. .. .. 395
KIM, S.-Y., MONAGHAN, P. Interacting effects of nest shelter and breeder quality on behaviour and breeding performance of herring gulls .. .. .. .. .. .. .. .. 301
kinship and female competition in wild house mice .. .. .. .. .. .. .. 1259
KLEINDORFER, S., FESSL, B., HOI, H. Avian nest defence behaviour: assessment in relation to predator distance and type, and nest height .. .. .. .. .. .. .. .. 307
KLUG, H., CHIN, A., ST MARY, C.M. The net effects of guarding on egg survivorship in the flagfish, *Jordanella floridae* .. .. .. .. .. .. .. .. .. 661
KOENE, J.M., TER MAAT, A. Sex role alternation in the simultaneously hermaphroditic pond snail *Lymnaea stagnalis* is determined by the availability of seminal fluid .. .. .. 845
KÖLLIKER, M., CHUCKALOVCAK, J.P., BRODIE, E.D.III Offspring chemical cues affect maternal food provisioning in burrower bugs, *Sebirus cinctus* .. .. .. .. .. .. .. 959
KORZAN, W.J. *see* FORSTER, G.L.
KOULOUSSIS, N.A. *see* KRAAIJEVELD, K.
KRAAIJEVELD, K., KATSOYANNOS, B.I., STAVRINIDES, M., KOULOUSSIS, N.A., CHAPMAN, T. Remating in wild females of the Mediterranean fruit fly, *Ceratitis capitata* .. .. .. .. .. 771
KRALIK, J.D. *see* MURRAY, E.A.
KUDAEVA, O.T. *see* LITVINOVA, E.A.
KURIAN, K.V. *see* CRONIN, K.A.

*Lacerta monticola:* antipredator behaviour .. .. .. .. .. .. .. .. 1
lactate levels of male fiddler crabs .. .. .. .. .. .. .. .. .. 569
LACY, R.C. *see* MARGULIS, S.W.
ladybirds: predator searching by .. .. .. .. .. .. .. .. .. 235
LANGLOIS, D. *see* MONCOMBE, A.-S.
*Lanius excubitor* .. .. .. .. .. .. .. .. .. .. .. 529
LARSON, J.K., McCORMICK, M.I. The role of chemical alarm signals in facilitating learned recognition of novel chemical cues in a coral reef fish .. .. .. .. .. .. .. 51
*Larus argentatus* .. .. .. .. .. .. .. .. .. .. .. 301
Larval begging for food enhances reproductive options in the ponerine ant .. .. .. .. 293
*Lasius niger* .. .. .. .. .. .. .. .. .. .. .. .. 535
LAVERTY, T.M. *see* GEGEAR, R.J.
learned recognition of chemical cues in coral reef fish .. .. .. .. .. .. .. 51
learning and foraging behaviour of red-backed salamanders .. .. .. .. .. .. 721
LEE, D.R. *see* GIBBONS, M.E.
LEONARD, M.L., HORN, A.G., MUKHIDA, A. False alarms and begging in nestling birds .. .. .. 701
*Leptopilina boulardi* .. .. .. .. .. .. .. .. .. .. .. 1227
*Leptopilina heterotoma* .. .. .. .. .. .. .. .. .. .. .. 1227
lifetime mating success in damselflies .. .. .. .. .. .. .. .. .. 1305
LIMA, S.L. *see* BEDNEKOFF, P.A.
limb autonomy in field crickets .. .. .. .. .. .. .. .. .. .. 151
*Linepithema humile* .. .. .. .. .. .. .. .. .. .. .. 741
LITTLE, A.C. *see* FEINBERG, D.R.
LITVINOVA, E.A., KUDAEVA, O.T., MERSHIEVA, L.V., MOSHKIN, M.P. High level of circulating testosterone abolishes decline in scent attractiveness in antigen-treated male mice .. .. 511
lizards: assessment in contests and size .. .. .. .. .. .. .. .. .. 1325
LLOYD-SMITH, J.O. *see* CROSS, P.C.
local mate competition and primary sex ratio adjustment by ant queens .. .. .. .. .. 1031
local population density and migration in Mormon crickets .. .. .. .. .. .. 437
locusts: food choices and antipredator strategies .. .. .. .. .. .. .. .. 471
LÓPEZ, P., HAWLENA, D., POLO, V., AMO, L., MARTIN, J. Sources of individual shy-bold variations in antipredator behaviour of male Iberian rock lizards .. .. .. .. .. .. 1
*Loxodonta africana* .. .. .. .. .. .. .. .. .. .. .. 1357
LUBJUHN, T. *see* SCHMOLL, T.
*Lymnaea stagnalis* .. .. .. .. .. .. .. .. .. .. .. 845
LYNCH, K.S., RAND, A.S., RYAN, M.J., WILCZYNSKI, W. Plasticity in female mate choice associated with changing reproductive states .. .. .. .. .. .. .. .. 689

*Macaca mulatta* .. .. .. .. .. .. .. .. .. .. .. .. 991
McCORMICK, M.I. *see* LARSON, J.K.
McGRAW, K.J., HILL, G.E., PARKER, R.S. The physiological costs of being colourful: nutrional control of caretenoid utilization in the American goldfinch, *Carduelis tristis* .. .. .. .. 653
McGREGOR, P.K. *see* PEAKE, T.M.
McLAY, C. *see* HAZLETT, B.A.
McLENNAN, D.A. Changes in response to olfactory cues across the ovulatory cycle in brook sticklebacks, *Culaea inconstans* .. .. .. .. .. .. .. .. 181
MADISON, D.M. *see* SULLIVAN, A.M.
MAHOMETA, M.J., DOMJAN, M. Classical conditioning increases reproductive success in Japanese quail, *Coturnix japonica* .. .. .. .. .. .. .. .. .. 983
male-male encounters and sound production during courtship in cichlid fish .. .. .. .. 595
males
assessment in contests of lizards .. .. .. .. .. .. .. .. .. 1325
damselflies and female mating status .. .. .. .. .. .. .. .. 797
kinship and odour preferences of female house mice .. .. .. .. .. .. 1147
mating ability in bulb mites .. .. .. .. .. .. .. .. .. 1101
new alpha on female stress in baboons .. .. .. .. .. .. .. .. 1211
rock sparrows, prefer ornamented females .. .. .. .. .. .. .. .. 1243
size and sexual cannibalism in wolf spiders .. .. .. .. .. .. .. 83
spacing in choruses of barking treefrogs .. .. .. .. .. .. .. .. 419
spatial ability and mate choice in meadow voles .. .. .. .. .. .. .. 1121
territoriality and oviposition in the zebrafish .. .. .. .. .. .. .. 1317
mammary pheromone of rabbits .. .. .. .. .. .. .. .. .. 29
*Manduca sexta* .. .. .. .. .. .. .. .. .. .. .. .. 407
MANICA, A. *see* THOMAS, L.K.
MANN, J., WATSON-CAPPS, J.J. Surviving at sea: ecological and behavioural predictors of calf mortality in Indian Ocean bottlenose dolphins, *Tursiops* species. .. .. .. .. .. .. 899
MARCHETTI, G.M. *see* SCAPINI, F.
MARGULIS, S.W., NABONG, M., ALAKS, G., WALSH, A., LACY, R.C. Effects of early experience on subsequent parental behaviour and reproductive success in oldfield mice, *Peromyscus polionotus* .. 627
MARLER, P. *see* NELSON, D.A.
marmot: alarm calls, information in .. .. .. .. .. .. .. .. .. 353
*Marmota flaviventris* .. .. .. .. .. .. .. .. .. .. .. 353
MARTIN, J. *see* LÓPEZ, P.
MASON, A.C. *see* ELIAS, D.O.
mate choice
in assassin bugs .. .. .. .. .. .. .. .. .. .. .. 275
in meadow voles .. .. .. .. .. .. .. .. .. .. .. 1121
in ornate tree lizards .. .. .. .. .. .. .. .. .. .. 219
in rock sparrows .. .. .. .. .. .. .. .. .. .. .. 1243
in wolf spiders .. .. .. .. .. .. .. .. .. .. .. 83
mate competition
and spatial ability of male meadow voles .. .. .. .. .. .. .. .. 375
in the zebrafish .. .. .. .. .. .. .. .. .. .. .. 1317
mate-locating ability in male garter snakes .. .. .. .. .. .. .. .. 1251
mate loss: differential response by males and females .. .. .. .. .. .. .. 551
MATEOS, C. The subordination stress paradigm and the relation between testostrone and corticosterone in male ring-necked pheasants .. .. .. .. .. .. .. 249
maternal food provisioning in burrower bugs .. .. .. .. .. .. .. .. 959
MATESSI, G. *see* PEAKE, T.M.
mating sequences in mountain scorpion, female control of .. .. .. .. .. .. 453
mating status of female damselflies .. .. .. .. .. .. .. .. .. 797
mating success
in damselflies .. .. .. .. .. .. .. .. .. .. .. 1303
in jumping spiders .. .. .. .. .. .. .. .. .. .. .. 931
in male garter snakes .. .. .. .. .. .. .. .. .. .. .. 1251
MATSUMASA, M., MURAI, M. Changes in blood glucose and lactate levels of male fiddler crabs: effects of aggression and claw waving .. .. .. .. .. .. .. .. 569

MAUMELAT, S. *see* AUBRET, F.
meadow voles
female mate choice in .. .. .. .. .. .. .. .. .. .. 1121
spatial ability of .. .. .. .. .. .. .. .. .. .. .. 375
Mediterranean fruit fly: remating in females .. .. .. .. .. .. .. .. 771
meerkats
'false feeding' and aggression in .. .. .. .. .. .. .. .. .. 1273
play fighting by .. .. .. .. .. .. .. .. .. .. .. 1023
MEIKLE, D.B.
*see* ENSMINGER, A.L.
*see* SPRITZER, M.D.
*Meleagris gallopavo* .. .. .. .. .. .. .. .. .. .. .. 387
*Melospiza melodia* .. .. .. .. .. .. .. .. .. .. .. 189
MENDA, G. *see* SHAFIR, S.
MERSHIEVA, L.V. *see* LITVINOVA, E.A.
mice
excluding neighbours from territories .. .. .. .. .. .. .. .. 785
testosterone and scent attractiveness in .. .. .. .. .. .. .. .. 511
MICHALCZYK, L. *see* RADWAN, J.
*Microtus pennsylvanicus*
female mate choice of .. .. .. .. .. .. .. .. .. .. 1121
spatial ability of .. .. .. .. .. .. .. .. .. .. .. 375
migration and local population density in Mormon crickets .. .. .. .. .. .. 437
MILLER, C.T., IGUINA, C.G., HAUSER, M.D. Processing vocal signals for recognition during antiphonal calling in tamarins .. .. .. .. .. .. .. .. 1387
MITCHELL, J. Queue selection and switching by false clown anemonefish, *Amphiprion ocellaris* .. .. 643
mites discriminate plant volatiles by herbivores .. .. .. .. .. .. .. .. 869
MOCK, D.W. *see* SCHWAGMEYER, P.L.
MONAGHAN, P. *see* KIM, S.-Y.
MONCOMBE, A.-S., COUREAUD, G., QUENNEDEY, B., LANGLOIS, D., PERRIER, G., SCHAAL, B. The mammary pheromone of the rabbit: from where does it come? .. .. .. .. 29
*Monodelphis domestica* .. .. .. .. .. .. .. .. .. .. .. 635
MOORE, A.J. *see* SMISETH, P.T.
MOORE, F.R. *see* CIMPRICH, D.A.
MOORE, S.E. *see* STAFFORD, K.M.
MORGAN, E. *see* SCAPINI, F.
Mormon crickets: local population density and movement in .. .. .. .. .. .. 437
MORRIS, M.R., MORETZ, J.A., FARLEY, K., NICOLETTO, P. The role of sexual selection in the loss of sexually selected traits in the swordtail fish *Xiphophorus continens* .. .. .. .. 1415
mortality of bottlenose dolphin calves .. .. .. .. .. .. .. .. .. 899
MORTON, E.S. *see* WOOLFENDEN, B.E.
MOSHKIN, M.P. *see* LITVINOVA, E.A.
mountain scorpion: female control of mating sequences .. .. .. .. .. .. .. 453
moustached warbler: nest defence behaviour .. .. .. .. .. .. .. .. 307
MUKHIDA, A. *see* LEONARD, M.L.
MUNOS, O. *see* BLUMSTEIN, D.T.
MURAI, M. *see* MATSUMASA, M.
MURPHY, C.G., FLOYD, S.B. The effect of call amplitude on male spacing in choruses of barking treefrogs, *Hyla gratiosa* .. .. .. .. .. .. .. .. .. 419
MURRAY, E.A., KRALIK, J.D., WISE, S.P. Learning to inhibit prepotent responses: successful performance by rhesus macaques, *Macaca mulatta*, on the reversed-contingency task .. .. 991
*Mus domesticus*
excluding neighbours from territories .. .. .. .. .. .. .. .. 785
female, reproduction and odour preferences of .. .. .. .. .. .. .. 1147
*Mus musculus*
female competition in .. .. .. .. .. .. .. .. .. .. 1259
testosterone and scent attractiveness in .. .. .. .. .. .. .. .. 511
*Myrmecia gulosa* .. .. .. .. .. .. .. .. .. .. .. 777

NABONG, M. *see* MARGULIS, S.W.
*Nasonia vitripennis* .. .. .. .. .. .. .. .. .. .. .. 1107
navigation of pigeons, simulating .. .. .. .. .. .. .. .. .. 813
nectar feeding by hawkmoths .. .. .. .. .. .. .. .. .. .. 407
NEHMZOW, U. *see* WILTSCHKO, R.
neighbour intrusions and simulated courtship interactions in whitethroat .. .. .. .. 161
*Neolamprologus pulcher* .. .. .. .. .. .. .. .. .. .. .. 19
nepotistic mobbing behaviour in Siberian jay .. .. .. .. .. .. .. .. 345
nest defence behaviour in warblers .. .. .. .. .. .. .. .. .. 307
nest shelter and breeder quality in herring gulls .. .. .. .. .. .. .. .. 301
nestling birds, false alarms and begging in .. .. .. .. .. .. .. .. 701
NEUSER, K., HUSSE, J., STOCK, P., GERBER, B. Appetitive olfactory learning in *Drosophila* larvae: effects of repetition, reward strength, age, gender, assay type and memory span .. .. 891
NICOLIS, S.C., THERAULAZ, G., DENEUBOURG, J.L. The effect of aggregates on interaction rate in ant colonies .. .. .. .. .. .. .. .. .. .. .. 535
*Nicrophorus vespilloides* .. .. .. .. .. .. .. .. .. .. .. 551
NOË, R. *see* RANGE, F.
NOËL, M.V., GRANT, J.W.A., CARRIGAN, J.G. EFFECTS OF COMPETITOR-TO-RESOURCE RATIO ON AGGRESSION AND SIZE VARIATION WITHIN GROUPS OF CONVICT CICHLIDS .. .. 1157
nonrandom distribution of paternity in shorebirds .. .. .. .. .. .. .. 765
NOWACEK, D.P. *see* GANNON, D.P.
NOWICKI, S. *see* ANDERSON, R.C.
nutrient rewards and herbivore diet selection .. .. .. .. .. .. .. .. 541
nutrional control of caretenoid utilization in the American goldfinch .. .. .. .. .. 653

odour
appetitive learning in fruit flies .. .. .. .. .. .. .. .. .. 891
and changes in ovulatory cycle in brook sticklebacks .. .. .. .. .. .. 181
mammary pheromone of rabbits .. .. .. .. .. .. .. .. .. 29
olfactory cues in nectar feeding by hawkmoths .. .. .. .. .. .. .. .. 407
preferences of female house mice .. .. .. .. .. .. .. .. .. 1147
offspring chemical cues and maternal food provisioning in burrower bugs .. .. .. .. 959
oldfield mice: parental behaviour and reproductive success .. .. .. .. .. .. 627
olfactory cues in nectar feeding by hawkmoths .. .. .. .. .. .. .. .. 407
*Onchorhynchus mykiss* .. .. .. .. .. .. .. .. .. .. .. 579
opossums: skin and gland odours elicit investigation by .. .. .. .. .. .. .. 635
opponent recognition in male green anoles .. .. .. .. .. .. .. .. 733
orang-utans: Level 1 perspective taking in .. .. .. .. .. .. .. .. 679
*Orcinus orca* .. .. .. .. .. .. .. .. .. .. .. .. 395
ORD, T.J., MARTINS, E.P., THAKUR, S., MANE, K.K., BÖRNER, K. Trends in animal behaviour research (1968-2002): ethoinformatics and the mining of library databases .. .. .. 1399
*Oreochromis massambicus* .. .. .. .. .. .. .. .. .. .. 595
oviposition
and male territoriality in the zebrafish .. .. .. .. .. .. .. .. 1317
in swallowtail butterfly .. .. .. .. .. .. .. .. .. .. 107
*Ovis aries*
response to variability in spatial resource distribution .. .. .. .. .. .. 1069
sexual segregation in .. .. .. .. .. .. .. .. .. .. 827
ovulatory cycle in brook sticklebacks, changes in .. .. .. .. .. .. .. 181

PALANZA, P., DELLA SETA, D., FERRARI, P.F., PARMIGIANI, S. Female competition in wild house mice depends upon timing of female/male settlement and kinship between females .. .. 1259
*Papilio polyxenes* .. .. .. .. .. .. .. .. .. .. .. 107
*Papio hamadryas*
new alpha males on female stress .. .. .. .. .. .. .. .. .. 1211
quadratic postconflict affiliation among bystanders .. .. .. .. .. .. 1345
parasitoids
costs and benefits of host feeding in .. .. .. .. .. .. .. .. 1293
superparasitism acceptance by .. .. .. .. .. .. .. .. .. 1227

PAREDES, R., JONES, I.L., BONESS, D.J. Reduced parental care, compensatory behaviour and reproductive costs of thick-billed murres equipped with data loggers .. .. .. .. 197
parental behaviour and reproductive success in oldfield mice .. .. .. .. .. .. 627
parental care
in brooding pythons .. .. .. .. .. .. .. .. .. .. 1043
reduced, in thick-billed murres .. .. .. .. .. .. .. .. .. 197
PARKER, R.S. *see* McGRAW, K.J.
PARTRIDGE, J.C. *see* WHITE, E.M.
*Parus ater:* extrapair paternity in.. .. .. .. .. .. .. .. .. .. 1013
*Parus major:* song type matching and switching in .. .. .. .. .. .. .. 1063
*Passer domesticus* .. .. .. .. .. .. .. .. .. .. 481
passerine migrants and predation risk during stopover .. .. .. .. .. .. .. 1173
passive listening hypothesis .. .. .. .. .. .. .. .. .. .. 709
patch selection by chaffinches .. .. .. .. .. .. .. .. .. .. 337
'pay to stay' hypothesis in cichlid fish .. .. .. .. .. .. .. .. .. 19
PEAKE, T.M., MATESSI, G., McGREGOR, P.K., DABELSTEEN, T. Song type matching, song type switching and eavesdropping in male great tits .. .. .. .. .. .. 1063
PEETERS, C. *see* DIETEMANN, V.
PERATTI, A.V., CARRERA, P. Female control of mating sequences in the mountain scorpion, *Zabius fuscus:* males do not use coercion as a response to unreceptive females .. .. .. 453
PÉREZ-BARBERÍA, F.J., ROBERTSON, E., GORDON, I.J. Are social factors sufficient to explain sexual segregation in ungulates? .. .. .. .. .. .. .. .. .. .. 827
PÉREZ-BARBERÍA, F.J. *SEE* YEARSLEY, J.M.
peripheral vigilance, testing for in dark-eyed juncos .. .. .. .. .. .. .. 1165
*Perisoreus infaustus* .. .. .. .. .. .. .. .. .. .. 345
*Peromyscus polionotus* .. .. .. .. .. .. .. .. .. .. 627
PERRETT, D.I. *see* FEINBERG, D.R.
PERRIER, G. *see* MONCOMBE, A.-S.
personality traits in dogs .. .. .. .. .. .. .. .. .. .. 283
PERSONS, M.H., UETZ, G.W. Sexual cannibalism and mate choice decisions in wolf spiders: influence of male size and secondary sexual characters .. .. .. .. .. .. .. 83
perspective taking in an orang-utan .. .. .. .. .. .. .. .. .. 679
*Petronia petronia* .. .. .. .. .. .. .. .. .. .. 1243
*Phasianus colchicus* .. .. .. .. .. .. .. .. .. .. 249
pheromone producton, cost of in fruit flies .. .. .. .. .. .. .. .. 851
*Philomachus pugnax* .. .. .. .. .. .. .. .. .. .. 765
*Phyllomorpha laciniata* .. .. .. .. .. .. .. .. .. .. 269
*Physalaemus pustulosis* .. .. .. .. .. .. .. .. .. .. 689
*Phytoseiulus persimilis* .. .. .. .. .. .. .. .. .. .. 869
PICARD, A.L. *see* SULLIVAN, A.M.
pigeons: simulating navigation of .. .. .. .. .. .. .. .. .. 813
pigs: individual coping characteristics of .. .. .. .. .. .. .. .. 1085
piophillid fly: ejaculate feeding and female fitness in .. .. .. .. .. .. .. 489
plant secondary compounds and herbivore diet selection .. .. .. .. .. .. 541
plasticity in female mate choice .. .. .. .. .. .. .. .. .. .. 689
play fighting in wild meerkats .. .. .. .. .. .. .. .. .. .. 1023
*Plethodon cinereus*
discrimination of predator diet cues by .. .. .. .. .. .. .. .. 1425
learning and foraging behaviour in .. .. .. .. .. .. .. .. 721
*Poecilia reticulata*
female mate choice in .. .. .. .. .. .. .. .. .. .. 999
spectral irradiance and foraging efficiency in .. .. .. .. .. .. .. 519
*Polioptila xaerulea* .. .. .. .. .. .. .. .. .. .. 1173
POLO, V. *see* LÓPEZ, P.
ponerine ant: larval begging for food in .. .. .. .. .. .. .. .. .. 293
*Pongo pygmaeus* .. .. .. .. .. .. .. .. .. .. .. 679
postconflict aggression among spotted hyaenas .. .. .. .. .. .. .. .. 209
POWERS, S.J. *see* ARMSWORTH, C.G.
pre-emptive appeasement in cichlid fish.. .. .. .. .. .. .. .. .. 19

predation
predator avoidance in fiddler crabs .. .. .. .. .. .. .. .. 603
visual cues .. .. .. .. .. .. .. .. .. .. .. 615
predator diet cues in salamanders .. .. .. .. .. .. .. .. .. 1425
predator searching by ladybird beetle .. .. .. .. .. .. .. .. 235
preferential hemifield use in black-winged stilt .. .. .. .. .. .. .. 1077
prey detection by bottlenose dolphins .. .. .. .. .. .. .. .. 709
responses by slugs to chemicals .. .. .. .. .. .. .. .. .. 805
responses to risk in the crab .. .. .. .. .. .. .. .. .. 967
predation risk
of elks by wolves .. .. .. .. .. .. .. .. .. .. .. 1181
and individual activity rates in wintering Eurasian woodcocks .. .. .. .. .. 39
to passerines during stopover .. .. .. .. .. .. .. .. .. 1173
predator defence
by *Cyclosa* spiders .. .. .. .. .. .. .. .. .. .. .. 1055
in gyrinid beetle .. .. .. .. .. .. .. .. .. .. .. 579
predators: social learning about .. .. .. .. .. .. .. .. .. .. 669
premating isolation and song differences in crickets .. .. .. .. .. .. .. 881
prey carcass decorations built by spiders .. .. .. .. .. .. .. .. .. 1055
primary sex ratio adjustment by ant queens .. .. .. .. .. .. .. .. 1031
*Prochyliza xanthostoma* .. .. .. .. .. .. .. .. .. .. .. 489
PROKOP, Z. *see* RADWAN, J.
*Pterosticichus melanarius* .. .. .. .. .. .. .. .. .. .. .. 805
PURSE, B.V., THOMPSON, D.J. Lifetime mating success in a marginal population of a damselfly, *Coenagrion mercuriale* .. .. .. .. .. .. .. .. .. .. 1303
*Python regius* .. .. .. .. .. .. .. .. .. .. .. 1043
pythons: parental care, energy expenditure for .. .. .. .. .. .. .. .. 1043

quadratic postconflict affiliation among bystanders in baboons .. .. .. .. .. .. 1345
QUELLMALZ, A. *see* SCHMOLL, T.
QUENNEDEY, B. *see* MONCOMBE, A.-S.
queue selection and switching by false clown anemonefish .. .. .. .. .. .. 643
QUINN, J.L., CRESSWELL, W. Escape response delays in wintering redshank, *Tringa totanus*, flocks: perceptual limits and economic decisions .. .. .. .. .. .. .. 1285
QUINN, J.L. *see* BUTLER, S.J.
*Quiscalus lugubris* .. .. .. .. .. .. .. .. .. .. .. 669
*Quiscalus quiscala* .. .. .. .. .. .. .. .. .. .. .. 701

rabbits: mammary pheromone of .. .. .. .. .. .. .. .. .. 29
RADESÄTER, T. *see* SVARTBERG, K.
RADWAN, J., MICHALCZYK, L., PROKOP, Z. Age dependence of male mating ability and sperm competition success in the bulb mite .. .. .. .. .. .. .. .. 1101
RAGUSO, R.A., WILLIS, M.A. Synergy between visual and olfactory cues in nectar feeding by wild hawkmoths, *Manduca sexta* .. .. .. .. .. .. .. .. .. 407
rainbow trout .. .. .. .. .. .. .. .. .. .. .. 579
RAND, A.S. *see* LYNCH, K.S.
RANGE, F., NOË, R. Can simple rules account for the pattern of triadic interactions in juvenile and adult female sooty mangabeys? .. .. .. .. .. .. .. .. 445
READ, A.J. *see* GANNON, D.P.
red-backed salamanders
discrimination of predator diet cues by .. .. .. .. .. .. .. .. 1425
foraging behaviour of .. .. .. .. .. .. .. .. .. .. 721
redshank: escape response delays in .. .. .. .. .. .. .. .. .. 1285
reed warbler: nest defence behaviour .. .. .. .. .. .. .. .. .. 307
*Regina grahamii* .. .. .. .. .. .. .. .. .. .. .. 363
*Regina septemvittata* .. .. .. .. .. .. .. .. .. .. .. 363
remating in females of Mediterranean fruit fly .. .. .. .. .. .. .. .. 771
RENNER, K.J. *see* FORSTER, G.L.
reproduction
queen regulating in the bulldog ant .. .. .. .. .. .. .. .. 777

and spatial structuring in Canada geese .. .. .. .. .. .. .. .. 973
reproduction and odour preferences of female house mice .. .. .. .. .. .. 1147
reproductive costs of thick-billed murres .. .. .. .. .. .. .. .. 197
reproductive options in the ponerine ant .. .. .. .. .. .. .. .. 293
reproductive states and plasticity in female mate choice .. .. .. .. .. .. .. 689
reproductive success
in Japanese quail .. .. .. .. .. .. .. .. .. .. .. 983
in oldfield mice .. .. .. .. .. .. .. .. .. .. .. 627
resource distribution: excluding neighbours from territories .. .. .. .. .. .. 785
resource utilization and alliances .. .. .. .. .. .. .. .. .. 127
reversed-contingency task in rhesus macaques .. .. .. .. .. .. .. .. 991
rhesus macaques: learning the reversed-contingency task .. .. .. .. .. .. 991
*Rhinocoris tristis* .. .. .. .. .. .. .. .. .. .. .. .. 275
*Rhizoglyphus robini* .. .. .. .. .. .. .. .. .. .. .. .. 1101
RICHTER, M. *see* ITZKOWITZ, M.
RIEDEL, J. *see* KAMINSKI, J.
ring-necked pheasants: testostrone and corticosterone in .. .. .. .. .. .. 249
risk sensitivity in honeybees, caste-specific differences .. .. .. .. .. .. .. 859
RIVAULT, C. *see* JEANSON, R.
RIVERO, A., WEST, S.A. The costs and benefits of host feeding in parasitoids .. .. .. .. 1293
ROBERTSON, E. *see* PÉREZ-BARBERíA, F.J.
ROBINSON, G.E. *see* TOTH, A.L.
rock sparrow: males prefer ornamented females .. .. .. .. .. .. .. .. 1243
ROGERS, L.J. *see* FREIRE, R.
ROSSANO, C. *see* SCAPINI, F.
ROWE, C., SKELHORN, J. Colour biases are a question of taste .. .. .. .. .. .. 587
ROWE, L. *see* BONDURIANSKY, R.
ruff: genetic similarity and nonrandom distribution of paternity in .. .. .. .. .. 765
RYAN, M.J. *see* LYNCH, K.S.

*Saguinus oedipus*
cooperative problem solving in .. .. .. .. .. .. .. .. .. 133
processing vocal signals for recognition .. .. .. .. .. .. .. .. 1387
*Salmo salar* .. .. .. .. .. .. .. .. .. .. .. .. 1037
*Salmo trutta* .. .. .. .. .. .. .. .. .. .. .. .. 1037
salmon: sneaky feeding by .. .. .. .. .. .. .. .. .. .. 1037
sandhoppers: sun compass orientation of .. .. .. .. .. .. .. .. .. 835
SANTANGELO, N. Courtship in the monagamous convict cichlid; what are individuals saying to rejected and selected mates? .. .. .. .. .. .. .. .. .. 143
SANTANGELO, N. *see* ITZKOWITZ, M.
SCAPINI, F., ROSSANO, C., MARCHETTI, G.M., MORGAN, E. The role of the biological clock in the sun compass orientation of the free-running individuals of *Talitrus saltator* .. .. .. 835
scent attractiveness and testosterone in mice .. .. .. .. .. .. .. .. 511
SCHAAL, B. *see* MONCOMBE, A.-S.
*Schistocerca gregaria* .. .. .. .. .. .. .. .. .. .. .. 471
*Schizocosa ocreata* .. .. .. .. .. .. .. .. .. .. .. 83
SCHMOLL, T., QUELLMALZ, A., DIETRICH, V., WINKEL, W., EPPLEN, J.T., LUBJUHN, T. Genetic similarity between pair mates is not related to extrapair paternity in the socially monagamous coal tit .. .. .. .. .. .. .. .. .. .. 1013
SCHOUTEN, W.G.P. *see* BOLHUIS, J.E.
SCHRAMA, J.W. *see* BOLHUIS, J.E.
SCHWABL, H.G. *see* SCHWAGMEYER, P.L.
SCHWAGMEYER, P.L., SCHWABL, H.G., MOCK, D.W. Dynamics of biparental care in house sparrows: hormonal manipulations of paternal contributions .. .. .. .. .. 481
*Scolopax rusticola* .. .. .. .. .. .. .. .. .. .. .. 39
SEARCY, W.A. *see* ANDERSON, R.C.
*Sebirus cinctus* .. .. .. .. .. .. .. .. .. .. .. .. 959
seismic signals and male mating success in a jumping spider .. .. .. .. .. .. 931
self-organized aggregation in cockroaches .. .. .. .. .. .. .. .. 169
seminal fluid and sex role alternation in pond snails .. .. .. .. .. .. .. 845

*Setophaga ruticilla* .. .. .. .. .. .. .. .. .. .. .. 1173
settling behaviour in desert isopods .. .. .. .. .. .. .. .. .. .. 1131
sex role alternation in pond snails .. .. .. .. .. .. .. .. .. .. 845
sex-typical parental roles in convict cichlid fish .. .. .. .. .. .. .. .. .. .. 95
sexual cannibalism in wolf spiders .. .. .. .. .. .. .. .. .. .. 83
sexual segregation in ungulates .. .. .. .. .. .. .. .. .. .. 257, 827
sexual selection
in black ratsnakes .. .. .. .. .. .. .. .. .. .. .. 225
of colour: health benefits .. .. .. .. .. .. .. .. .. .. 757
and loss of sexually selected traits in swordtail fish .. .. .. .. .. .. .. 1415
male damselflies detect female mating status .. .. .. .. .. .. .. 797
traits and sexual selection in the swordtail fish .. .. .. .. .. .. .. 1415
SEYFARTH, R.M. *see* BEEHNER, J.C.
SHAFIR, S., MENDA, G., SMITH, B.H. Caste-specific differences in risk sensitivity in honeybees, *Apis mellifera* .. .. .. .. .. .. .. .. .. .. .. 859
SHARPE, L.L. Play fighting does not affect subsequent fighting success in wild meerkats .. .. .. 1023
sheep: response to variability in spatial resource distribution .. .. .. .. .. .. 1069
SHEN, P.-S. *see* CHOU, I.-C.
SHILLITO, D.J., SHUMAKER, R.W., GALLUP, G.G.Jr, BECK, B.B. Understanding visual barriers: evidence for Level 1 perspective taking in an orang-utan, *Pongo pygmaeus* .. .. .. 679
SHINE, R., O'DONNELL, R.P., LANGKILDE, T., WALL, M.D., MASON, R.T. Snakes in search of sex: the relation between mate-locating ability and mating success in male garter snakes .. .. 1251
SHINES, R. *see* AUBRET, F.
shoaling with familiars may be exploited by outsiders in sticklebacks .. .. .. .. .. 329
shorebirds: genetic similarity and the nonrandom distribution of paternity in .. .. .. .. 765
short-tailed opossums: skin and gland odours elicit investigation by .. .. .. .. .. 635
SHUMAKER, R.W. *see* SHILLITO, D.J.
*Sialis sialis* .. .. .. .. .. .. .. .. .. .. .. .. 67
Siberian jay: nepotistic mobbing behaviour in .. .. .. .. .. .. .. .. 345
SIEBERT, E.R. *see* ENGH, A.L.
SIEFFERMAN, L., HILL, G.E. UV-blue structural coloration and competition for nestboxes in male bluebirds .. .. .. .. .. .. .. .. .. .. .. 67
signals/signalling
amplitude of and male spacing in barking treefrogs .. .. .. .. .. .. 419
for recognition in tamarins .. .. .. .. .. .. .. .. .. .. 1387
signature whistle use by bottlenose dolphins .. .. .. .. .. .. .. .. 1373
SILVERMAN, J. *see* BUCZKOWSKI, G.
SIMMONS, L.W., ZUK, M., ROTENBERRY, J.T. Immune function reflected in calling song characteristics in a natural population of the cricket *Teleogryllus commodus* .. .. .. .. .. 1235
SIMPSON, S.J. *see* DESPLAND, E.
SKELHORN, J. *see* ROWE, C.
skin and gland odours elicit investigation by female short-tailed opossums .. .. .. .. 635
SLATER, P.J.B. *see* DEECKE, V.B.
slugs: behavioural responses to chemicals in predation .. .. .. .. .. .. .. 805
SMISETH, P.T., DAWSON, C., VARLEY, E., MOORE, A.J. How do caring parents respond to mate loss? Differential response by males and females .. .. .. .. .. .. .. 551
SMITH, B.H. *see* SHAFIR, S.
SMITH, R. *see* FERNÁNDEZ-JURICIC, E.
snails: sex role alternation in .. .. .. .. .. .. .. .. .. .. 845
sneaky feeding by salmon with brown trout .. .. .. .. .. .. .. .. 1037
SNOEREN, T.A.L. *see* DE BOER, J.G.
SNOWDON, C.T. *see* CRONIN, K.A.
social cues in domestic goats .. .. .. .. .. .. .. .. .. .. 11
social factors and sexual segregation in ungulates .. .. .. .. .. .. .. 827
social groups: Bayesian analysis of hierarchies .. .. .. .. .. .. .. .. 1191
social learning about predators .. .. .. .. .. .. .. .. .. .. 669
socioecology of elephants .. .. .. .. .. .. .. .. .. .. 1359
SOLOMON, N.G. *see* SPRITZER, M.D.

song
*see also* calling
characteristics in crickets .. .. .. .. .. .. .. .. .. .. 1235
difference in of field crickets .. .. .. .. .. .. .. .. .. 881
learning by bird nestmates .. .. .. .. .. .. .. .. .. 1007
matching and switching in male great tits .. .. .. .. .. .. .. .. .. 1063
partial song matching in song sparrows .. .. .. .. .. .. .. .. .. 189
song sparrows: partial song matching in.. .. .. .. .. .. .. .. .. .. 189
sooty mangabeys: triadic interactions in.. .. .. .. .. .. .. .. .. .. 445
sound production during courtship in the cichlid fish .. .. .. .. .. .. .. .. 595
spatial ability of male meadow voles .. .. .. .. .. .. .. .. .. 375
spatial information, use of in domestic chicks .. .. .. .. .. .. .. .. 1093
spatial memory for relocating food targets in flower bats: .. .. .. .. .. .. 315
spatial structuring in Canada geese .. .. .. .. .. .. .. .. .. 973
spectral irradiance and foraging efficiency in guppies .. .. .. .. .. .. .. .. 519
SPENCE, R., SMITH, C. Male territoriality mediates density and sex ratio effects on oviposition in the zebrafish, *Danio rerio* .. .. .. .. .. .. .. .. .. 1317
sperm competition success in bulb mites .. .. .. .. .. .. .. .. .. 1101
spiders
prey carcass decorations built by .. .. .. .. .. .. .. .. .. 1055
seismic signals in male mating success .. .. .. .. .. .. .. .. .. 931
*Spodoptera exigua* .. .. .. .. .. .. .. .. .. .. .. 869
SPONZA, S. *see* VENTOLINI, N.
spotted hyaenas: patterns of alliance formation .. .. .. .. .. .. .. .. .. 209
SPRITZER, M.D., MEIKLE, D.B., SOLOMON, N.G. Female choice based on male spatial ability and aggressiveness among meadow voles .. .. .. .. .. .. .. .. .. 1121
SPRITZER, M.D., SOLOMON, N.G., MEIKLE, D.B. Influence of scramble competition for mates upon the spatial ability of male meadow voles .. .. .. .. .. .. .. .. 375
ST MARY, C.M. *see* KLUG, H.
STAFFORD, K.M., MOORE, S.E., FOX, C.G. Diel variation in blue whale calls recorded in the eastern tropical Pacific .. .. .. .. .. .. .. .. .. .. 951
starlings: vigilance and foraging behaviour .. .. .. .. .. .. .. .. .. 73
starvation and activity rates in Eurasian woodcocks .. .. .. .. .. .. .. .. 39
STAVRINIDES, M. *see* KRAAIJEVELD, K.
sticklebacks: changes in the ovulatory cycle .. .. .. .. .. .. .. .. 181
STOCK, P. *see* NEUSER, K.
*Sturnus vulgaris* .. .. .. .. .. .. .. .. .. .. .. 73
STUTCHBURY, B.J.M. *see* WOOLFENDEN, B.E.
subordination stress paradigm in ring-necked pheasants .. .. .. .. .. .. .. .. 249
*Sula nebouxii* .. .. .. .. .. .. .. .. .. .. .. 59
SULLIVAN, A.M., PICARD, A.L., MADISON, D.M. To avoid or not to avoid? factors influencing the discrimination of predator diet cues by a terrestrial salamander .. .. .. .. 1425
SULLIVAN, N.K. *see* HAMILTON, P.S.
SUMMERS, C.H. *see* FORSTER, G.L.
sun compass orientation of sandhoppers .. .. .. .. .. .. .. .. 835
superparasitism by two sympatric wasps.. .. .. .. .. .. .. .. .. 1227
*Suricata suricatta*
'false feeding' and aggression in .. .. .. .. .. .. .. .. .. 1273
play fighting in .. .. .. .. .. .. .. .. .. .. 1023
*Sus scrofa* .. .. .. .. .. .. .. .. .. .. .. 1085
SVARTBERG, K., TAPPER, I., TEMRIN, H., RADESÄTER, T., THORMAN, S. Consistency of personality traits in dogs .. .. .. .. .. .. .. .. .. .. .. 283
swallowtail butterfly: oviposition behaviour of .. .. .. .. .. .. .. .. 107
SWORD, G.A. Local population density and the activation of movement in migratory band-forming Mormon crickets .. .. .. .. .. .. .. .. .. .. 437
swordtail fish: sexual selection in .. .. .. .. .. .. .. .. .. 1415
*Sylvia communis*.. .. .. .. .. .. .. .. .. .. .. 161
SYMONDSON, W.O.C. *see* ARMSWORTH, C.G.
*Synceris caffer* .. .. .. .. .. .. .. .. .. .. .. 499

TABORSKY, M. *see* BERGMÜLLER, R.
*Tachycineta bivcolor* .. .. .. .. .. .. .. .. .. .. .. 701
*Taeniopoda eques* .. .. .. .. .. .. .. .. .. .. .. 463
*Talitrus saltator* .. .. .. .. .. .. .. .. .. .. .. 835
TAPPER, I. *see* SVARTBERG, K.
*Teleogryllus commodus* .. .. .. .. .. .. .. .. .. .. .. 1235
*Teleogryllus emma* .. .. .. .. .. .. .. .. .. .. .. 881
*Teleogryllus taiwanemma* .. .. .. .. .. .. .. .. .. .. .. 881
*Teleogryllus yezoemma* .. .. .. .. .. .. .. .. .. .. .. 881
TEMRIN, H. *see* SVARTBERG, K.
TER MAAT, A. *see* KOENE, J.M.
testosterone and scent attractiveness in mice .. .. .. .. .. .. .. .. 511
testostrone in ring-necked pheasants .. .. .. .. .. .. .. .. .. 249
*Tetranychus urticae* .. .. .. .. .. .. .. .. .. .. .. 869
*Thamnophis sirtalis parietalis* .. .. .. .. .. .. .. .. .. .. 1251
THEILE, J., WINTER, Y. Hierarchical strategy for relocating food targets in flower bats: spatial memory *versus* cue-directed search .. .. .. .. .. .. .. .. 315
THERAULAZ, G.
*see* JEANSON, R.
*see* NICOLIS, S.C.
thick-billed murres: reduced parental care by .. .. .. .. .. .. .. .. 197
THOMAS, L.K., MANICA, A. Intrasexual competition and mate choice in assassin bugs with uniparental male and female care .. .. .. .. .. .. .. .. 275
THORMAN, S. *see* SVARTBERG, K.
three-spined sticklebacks: foraging with familiars .. .. .. .. .. .. .. 329
THUMAN, K.A., GRIFFITH, S.C. Genetic similarity and the nonrandom distribution of paternity in a genetically highly polyandrous shorebird .. .. .. .. .. .. .. 765
TOMASELLO, M. *see* KAMINSKI, J.
TORRES, R., VELANDO, A. Male preference for female foot colour in the socially monagamous blue-footed booby, *Sula nebouxii* .. .. .. .. .. .. .. .. 59
TOTH, A.L., ROBINSON, G.E. Worker nutrition and division of labour in honeybees .. .. .. 427
trait-copying behaviour in guppies .. .. .. .. .. .. .. .. .. 999
trait variability hypothesis .. .. .. .. .. .. .. .. .. .. 939
tree lizards: female mate attraction in .. .. .. .. .. .. .. .. .. 219
tree swallows: false alarms and begging in .. .. .. .. .. .. .. .. 701
treefrogs: call amplitude and male spacing .. .. .. .. .. .. .. .. 419
TREMBLAY, Y. *see* DURIEZ, O.
triadic interactions in female sooty mangabeys .. .. .. .. .. .. .. .. 445
*Tringa totanus* .. .. .. .. .. .. .. .. .. .. .. 1285
TRYJANOWSKI, P., HROMADA, M. Do males of the great grey shrike, *Lanius excubitor,* trade food for extrapair copulations .. .. .. .. .. .. .. .. .. .. 529
TSO, I.-M. *see* CHOU, I.-C.
tungara frogs: plasticity in female mate choice .. .. .. .. .. .. .. .. 689
turkeys: coccidial infection and plumage coloration .. .. .. .. .. .. .. 387
*Tursiops* spp. .. .. .. .. .. .. .. .. .. .. .. 899
*Tursiops truncatus*
prey detection by .. .. .. .. .. .. .. .. .. .. .. 709
signature whistle use by .. .. .. .. .. .. .. .. .. .. 1373

*Uca lactea perplexa* .. .. .. .. .. .. .. .. .. .. .. 569
*Uca vomeris*
predator avoidance
escape decions .. .. .. .. .. .. .. .. .. .. .. 603
visual cues .. .. .. .. .. .. .. .. .. .. .. 615
UETZ, G.W. *see* PERSONS, M.H.
UHFA, E., CORDERO RIVERA, A. Male damselflies detect female mating status: importance for postcopulatory sexual selection .. .. .. .. .. .. .. .. 797
ungulates: sexual segregation in .. .. .. .. .. .. .. .. .. .. 257, 827
*Uria lomvia* .. .. .. .. .. .. .. .. .. .. .. 197
*Urosaurus ornatus* .. .. .. .. .. .. .. .. .. .. .. 219
UV-blue structural coloration in male bluebirds .. .. .. .. .. .. .. .. 67

VALLORTIGARA, G. *see* VENTOLINI, N.
VAN OPIJNEN, T. *see* VELTHUIS, B.-J.
VARALDI, J., FOUILLET, P., BOULÉTREAU, M., FLEURY, F. Superparasitism acceptance and patch-leaving mechanisms in parasitoids: a comparison between two sympatric wasps .. .. 1227
VARLEY, E. *see* SMISETH, P.T.
VELANDO, A. *see* TORRES, R.
VELTHUIS, B.-J., YANG, W., VAN OPIJNEN, T., WERREN, J.H. Genetics of female mate discrimination of heterospecific males in *Nasonia* (Hymenoptera, Ptermalidae) .. .. .. .. 1107
VENTOLINI, N., FERRERO, E.A., SPONZA, S., DELLA CHIESA, A., ZUCCA, P., VALLORTIGARA, G. Laterality in the wild: preferential hemifield use during predatory and sexual behaviour in the black-winged stilt .. .. .. .. .. .. .. .. .. 1077
vigilance
and foraging behaviour in starlings .. .. .. .. .. .. .. .. 73
in giraffes.. .. .. .. .. .. .. .. .. .. .. .. 1337
testing for in dark-eyed juncos .. .. .. .. .. .. .. .. .. 1165
visual barriers and orang-utans .. .. .. .. .. .. .. .. .. 679
visual cues in nectar feeding by hawkmoths .. .. .. .. .. .. .. .. 407
vocalisation
attractiveness of human male voices .. .. .. .. .. .. .. .. 561
behaviour of mammal-eating killer whales.. .. .. .. .. .. .. .. 395
for recognition in tamarins .. .. .. .. .. .. .. .. .. 1387
volatile secretions in gyrinid beetle predator defence .. .. .. .. .. .. .. 579
volatiles: mites discriminate between .. .. .. .. .. .. .. .. .. 869

WALSH, A. *see* MARGULIS, S.W.
WANG, P.-H. *see* CHOU, I.-C.
WAPLES, D.M. *see* GANNON, D.P.
warblers: avian nest defence behaviour .. .. .. .. .. .. .. .. .. 307
WARD, A.J.W., HART, P.J.B. Foraging benefits of shoaling with familiars may be exploited by outsiders .. 329
wasps
female mate discrimination in .. .. .. .. .. .. .. .. .. 1107
superparasitism by .. .. .. .. .. .. .. .. .. .. 1227
WATERS, R.M., BURGHARDT, G.M. The interaction of food motivation and experience in the ontogeny of chemoreception in crayfish snakes .. .. .. .. .. .. 363
WATSON-CAPPS, J.J. *see* MANN, J.
WATT, M.J. *see* FORSTER, G.L.
WATWOOD, S.L., OWEN, E.C.G., TYACK, P.L., WELLS, R.S. Signature whistle use by temporarily restrained and free-swimming bottlenose dolphins, *Tursiops truncatus* .. .. .. .. 1373
WEATHERHEAD, P.J. *see* BLOUIN-DEMERS, G.
WELLS, R.S. *see* GANNON, D.P.
WERREN, J.H. *see* VELTHUIS, B.-J.
WHEELER, J. *see* BONDURIANSKY, R.
WHITE, E.M., CHURCH, S.C., WILLOUGHBY, L.J., HUDSON, S.J., PARTRIDGE, J.C. Spectral irradiance and foraging efficiency in the guppy, *Poecilia reticulata* .. .. .. .. 519
WHITEHEAD, H., CONNOR, R. Alliances I. How large should alliances be? .. .. .. .. 117
WHITEHEAD, H., CONNOR, R. Alliances II. Rates of encounter during resource utilization: a general model of intrasexual alliance formation in fission-fusion societies .. .. .. .. 127
whitethroat: simulated courtship interactions in.. .. .. .. .. .. .. .. 161
WHITTENS, P.L. *see* BEEHNER, J.C.
WHITTINGHAM, M.J. *see* BUTLER, S.J.
WIDEMO, F. *see* JOHANSSON, B.G.
WIEGANT, V.M. *see* BOLHUIS, J.E.
WILCZYNSKI, W. *see* LYNCH, K.S.
WILLIS, M.A. *see* RAGUSO, R.A.
WILLOUGHBY, L.J. *see* WHITE, E.M.
WILTSCHKO, R., NEHMZOW, U. Simulating pigeon navigation .. .. .. .. .. .. 813
WINKEL, W. *see* SCHMOLL, T.

WINNIE, J.A.Jr *see* CREEL, S.
WINTER, Y. *see* THEILE, J.
WISE, S.P. *see* MURRAY, E.A.
WITTEMYER, G., DOUGLAS-HAMILTON, I., GETZ, W.M. The socioecology of elephants: analysis of the processes creating multitiered social structures .. .. .. .. .. .. 1357
wolf spiders: sexual cannibalism and mate choice in .. .. .. .. .. .. .. 83
wolves and elks' risk of predation .. .. .. .. .. .. .. .. .. 1181
WOODREY, M.S. *see* CIMPRICH, D.A.
WOOLFENDEN, B.E., STUTCHBURY, B.J.M., MORTON, E.S. Male Acadian flycatchers, *Empidonax virescens*, obtain extrapair fertilizations with distant females .. .. .. 921
worker nutrition and division of labour in honeybees .. .. .. .. .. .. .. 427

*Xiphophorus continens* .. .. .. .. .. .. .. .. .. .. .. 1415
*Xiphophorus helleri* .. .. .. .. .. .. .. .. .. .. .. 1139

YANG, W. *see* VELTHUIS, B.-J.
YEARSLEY, J.M., PÉREZ-BARBERÍA, F.J. DOES THE ACTIVITY BUDGET HYPOTHESIS EXPLAIN SEXUAL SEGREGATION IN UNGULATES? .. .. .. .. .. .. .. .. .. .. 257
yellow-bellied marmot: alarm calls of .. .. .. .. .. .. .. .. .. 353
YOUNG, S.A. *see* GINANE, C.

*Zabius fuscus* .. .. .. .. .. .. .. .. .. .. .. .. 453
zebrafish: male territoriality and oviposition in .. .. .. .. .. .. .. .. 1317
ZUCCA, P. *see* VENTOLINI, N.
ZURI, I., DOMBROWSKI, K., HALPERN, M. Skin and gland but not urine odours elicit conspicuous investigation by female grey short-tailed opossums, *Monodelphis domestica* .. .. .. 635